Fig 1. Prior Art: Current Popular Approach to Buffer or Solvent Blending

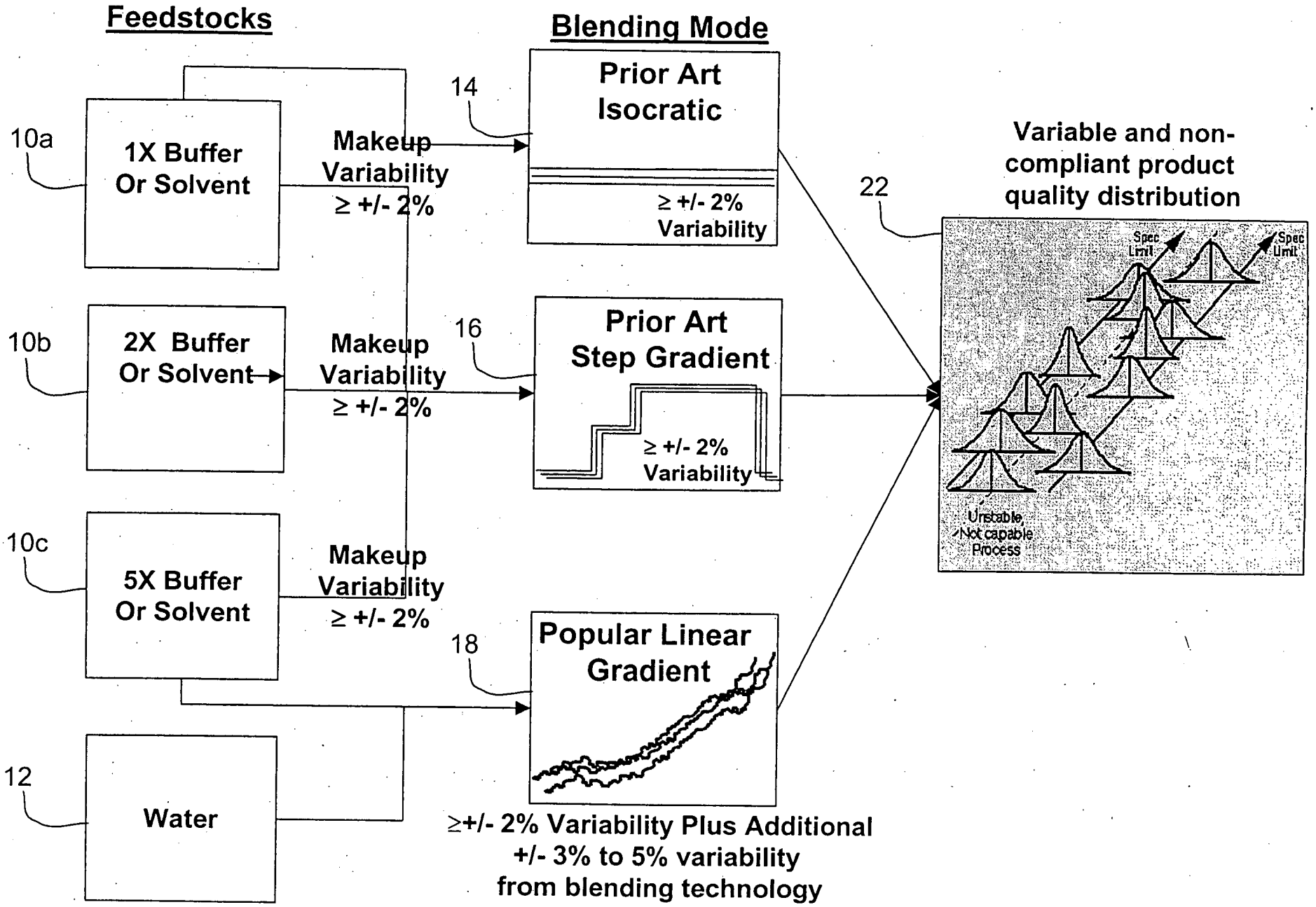


Fig 2

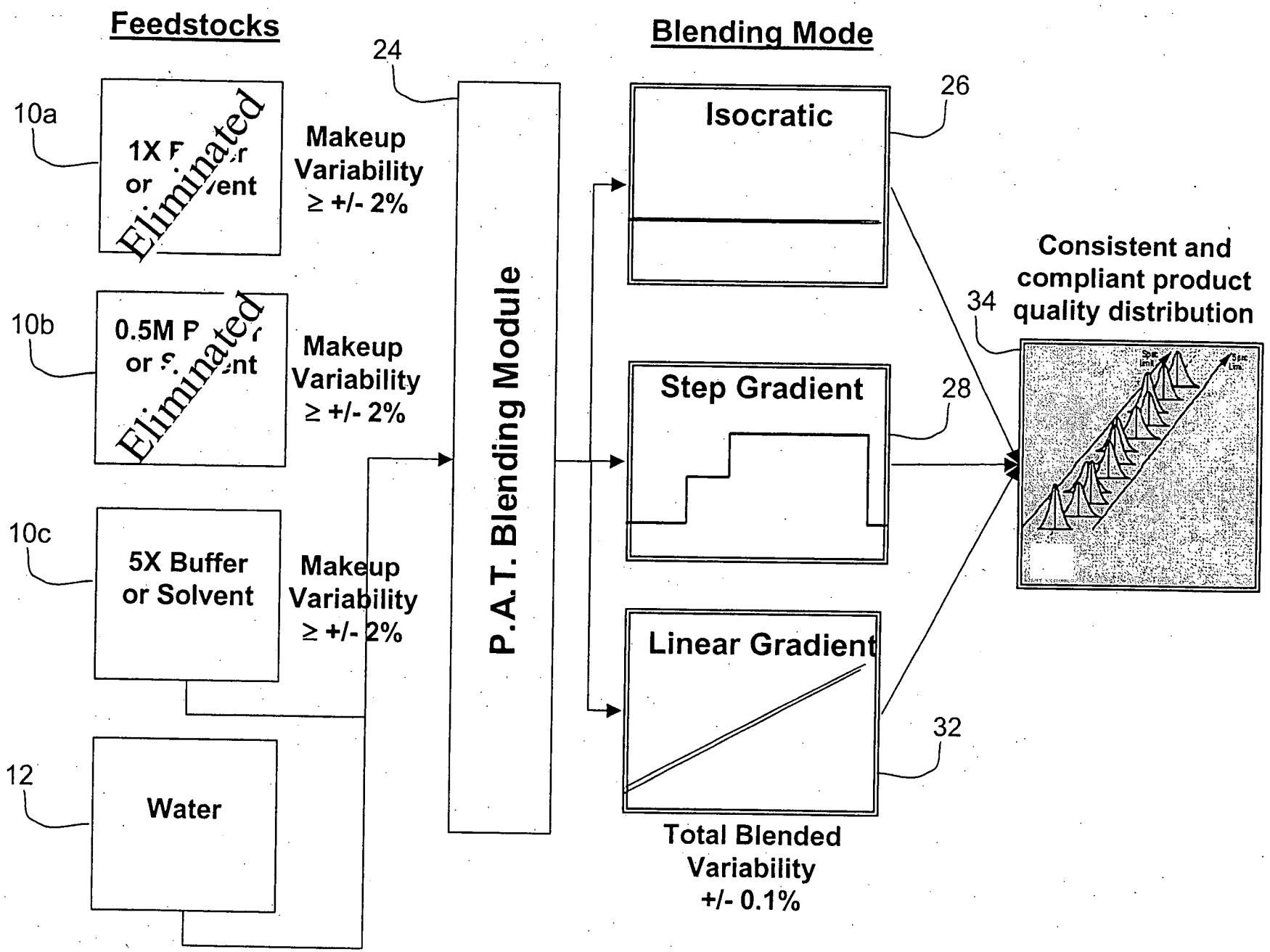
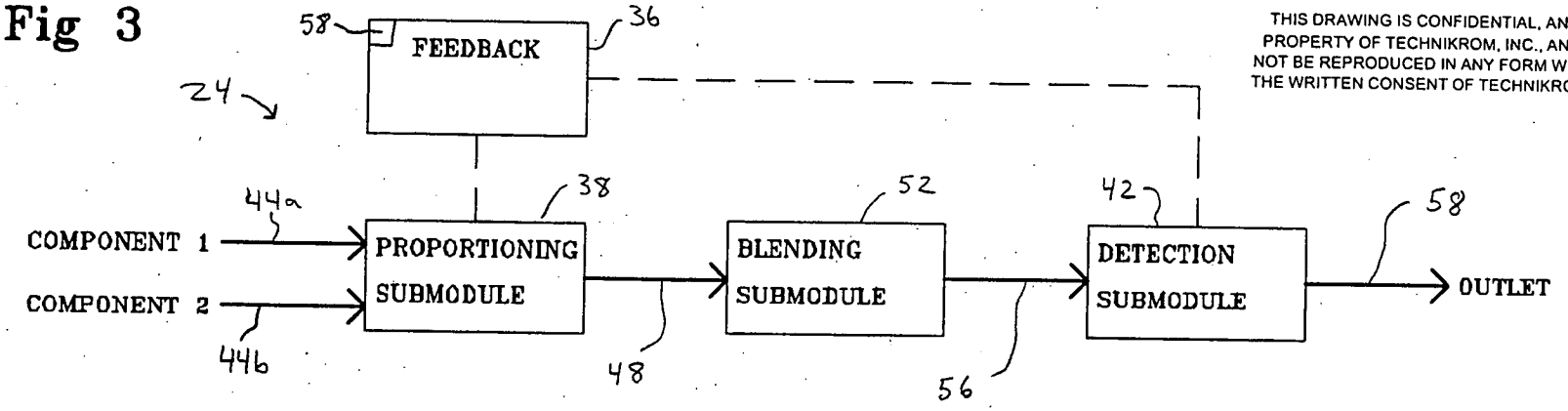
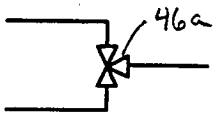

Feedstocks
Blending Mode
24
10a
1X F
or
vent
Eliminated
Makeup
Variability
≥ +/- 2%
10b
0.5M P
or s
nt
Eliminated
Makeup
Variability
≥ +/- 2%
10c
5X Buffer
or Solvent
Makeup
Variability
≥ +/- 2%
12
Water
P.A.T. Blending Module
Isocratic
26
Step Gradient
28
Linear Gradient
32
Total Blended
Variability
+/- 0.1%
34
Consistent and
compliant product
quality distribution

Fig 3

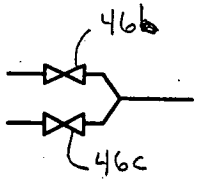


Proportioning Submodule Options

Single 3-Way Valve

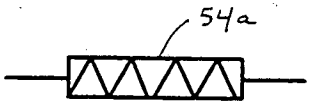


Two Control Valves

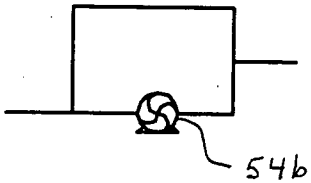


Blending Submodule Options

In-Line Mixer



Recirculating Mixer



Detection Submodule Options

Any ~~Physicochemical~~ Sensor

UV, NIR, pH, Conductivity, Temperature, etc.

Feedback Mechanisms

A processor interprets electrical output from detection module and provides input to proportioning module in order to maintain setpoint.

Microprocessor, PLC, PC, etc.

TECHNIKROM

TechniKrom PAT Blending Module

CREATED BY	CHECKED BY	DWG NO.	REV
KS		PAT-Module_REV8	8
SCALE NTS	DATE 10/15/03	SHEET 1 of 1	

Fig. 4

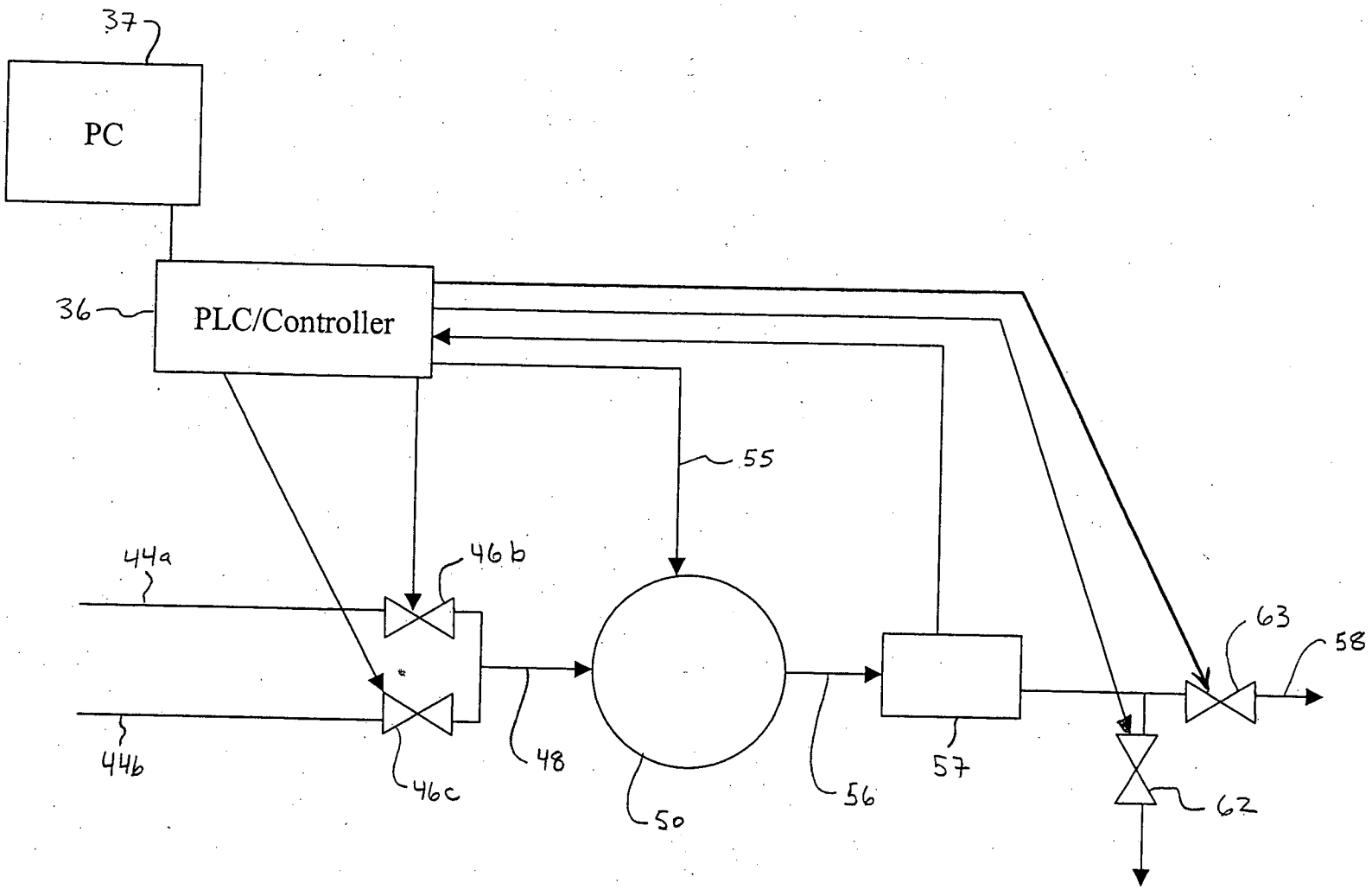
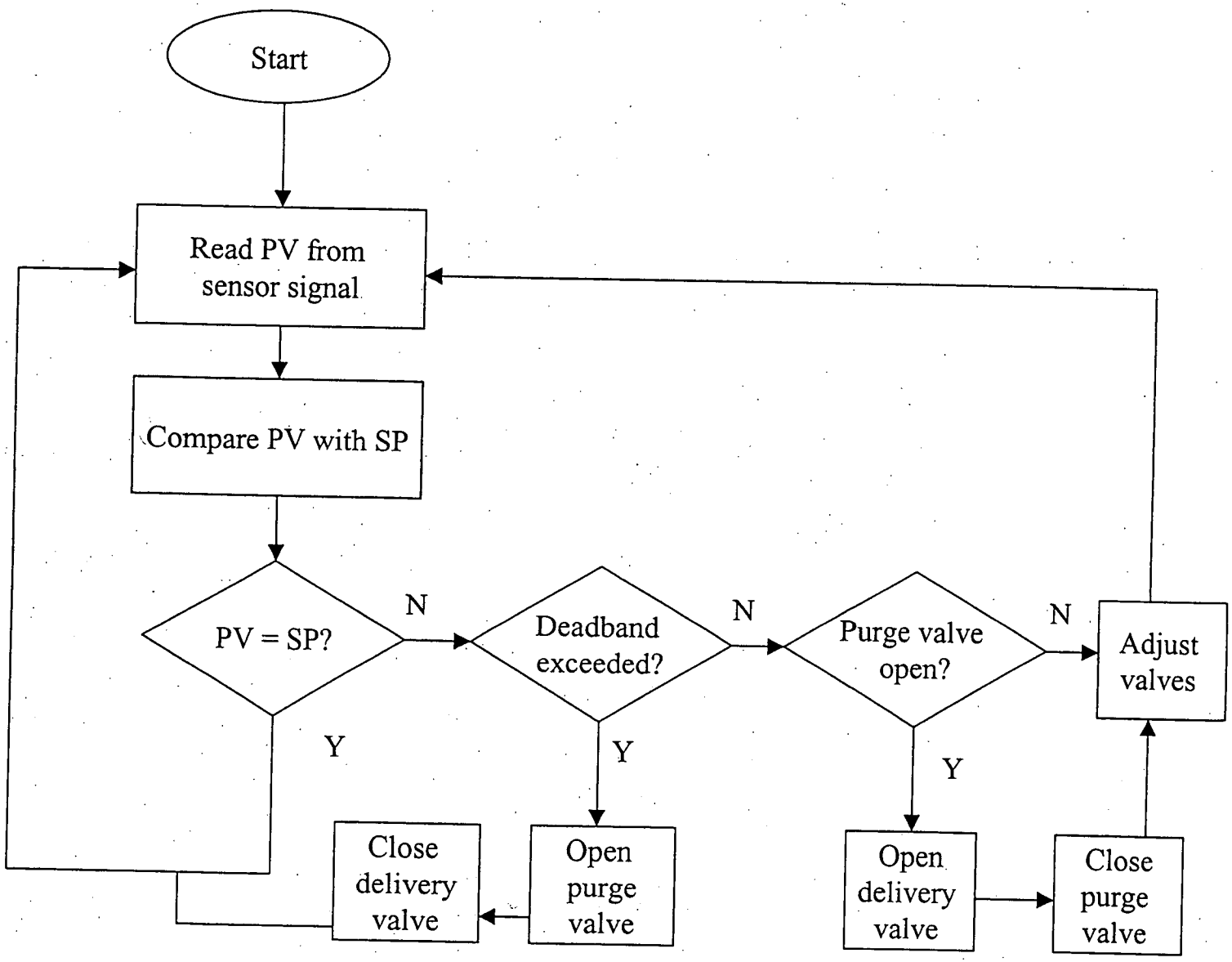
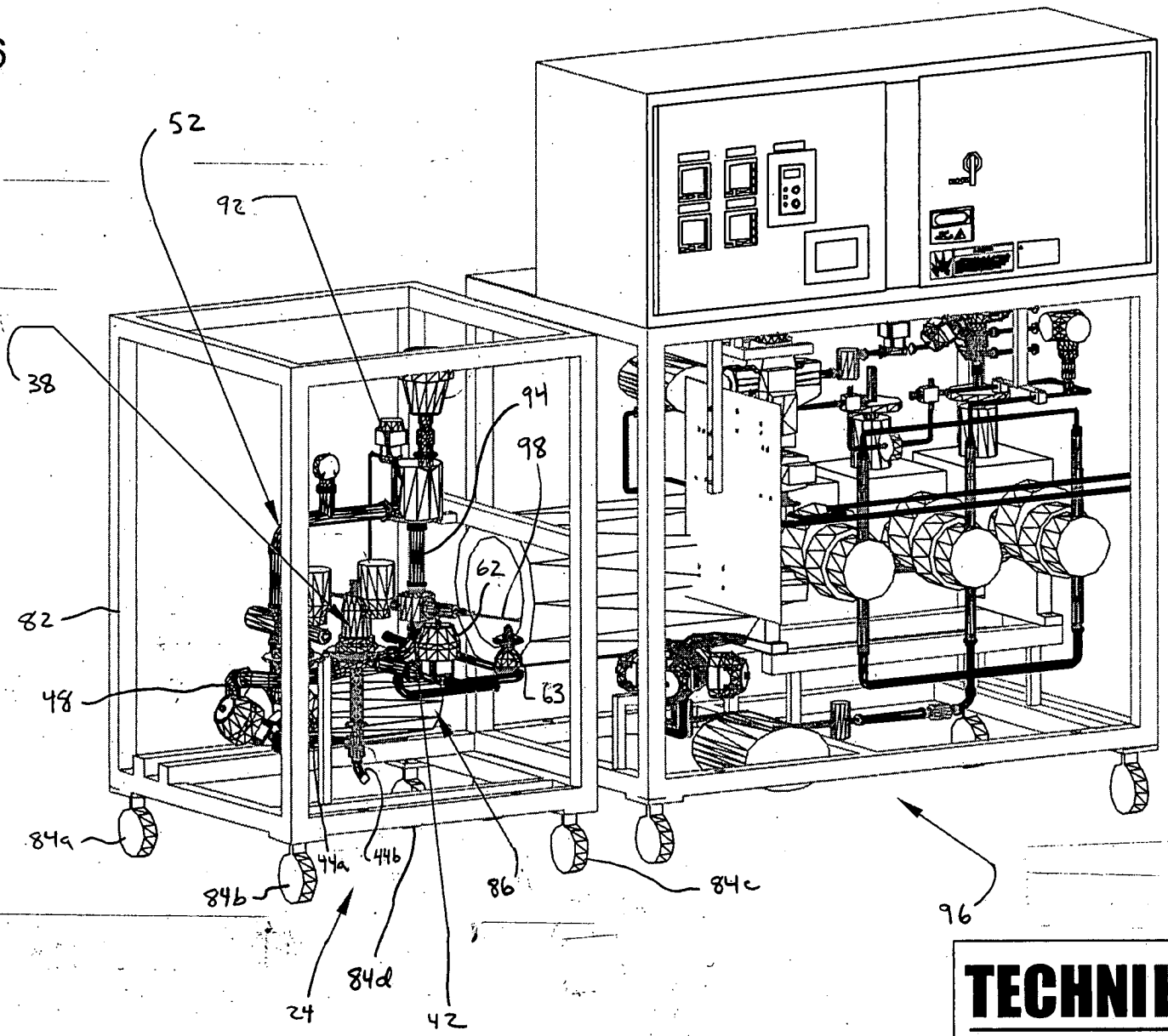


Fig. 5



CHGO1:30362472:1:10/17/03
263134-1

Fig 6



TECHNIKROM

PAT Blending Module with Existing System

CREATED BY	DWG NO.	REV
KJH	5300_skid_3D_REV4	2
SCALE NTS	DATE 09/28/03	SHEET 1 of 1